

**ABSTRACT OF THE DISCLOSURE**

Methods for detecting and compensating for multiple optical signals produced in a multi-mode fiber system are provided. A representative method includes

- 5 detecting a plurality of optical signals radiating from an end of the multi-mode fiber by a multisegment photodetector having different detector regions that detect different portions of the plurality of optical signals, and modifying detected signal by the multisegment photodetector to reduce the affects of modal dispersion among the plurality of optical signals. Other methods also are provided.

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